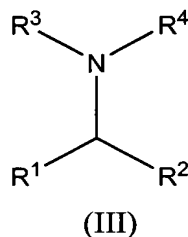


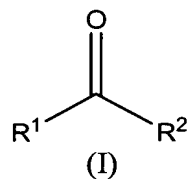
IN THE CLAIMS

Please amend the claims as follows:

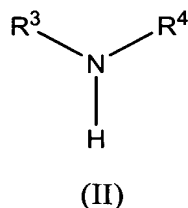
Claim 1 (Currently Amended): A process for preparing amines of the formula (III)



by reacting a compound of the formula (I)



with a compound of the formula (II)



which is carried out at a temperature of -40-100°C, in a solvent selected from the group consisting of alcohol, water, halogenated hydrocarbons, ethers, aromatic hydrocarbons, and mixtures thereof, where the radicals

R<sup>1</sup> to R<sup>4</sup> are selected independently from the group consisting of hydrogen, (C<sub>1</sub>-C<sub>24</sub>)-alkyl, (C<sub>2</sub>-C<sub>24</sub>)-alkenyl, (C<sub>2</sub>-C<sub>24</sub>)-alkynyl, (C<sub>6</sub>-C<sub>10</sub>)-aryl, CF<sub>3</sub>, CN, COOH, COOM, where M is a cation selected from the group consisting of Li<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, Mg<sup>2+</sup>, Ca<sup>2+</sup>, NH<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl)<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl/C<sub>6</sub>-C<sub>10</sub>-aryl)<sub>4</sub><sup>+</sup>, CHO, SO<sub>3</sub>H, COO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CONH<sub>2</sub>, CONHalkyl-(C<sub>1</sub>-C<sub>8</sub>), CONalkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub>), CO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CO-phenyl, COO-phenyl, COO-aryl-(C<sub>6</sub>-C<sub>10</sub>), CO-aryl-(C<sub>6</sub>-C<sub>10</sub>), P(aryl)<sub>2</sub>, Palkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub>), PO(aryl)<sub>2</sub>, POalkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub>),

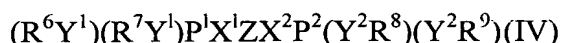
PO<sub>3</sub>H<sub>2</sub>, POalkyl-(C<sub>1</sub>-C<sub>4</sub>)(O-alkyl-(C<sub>1</sub>-C<sub>6</sub>)), PO(O-alkyl-(C<sub>1</sub>-C<sub>6</sub>))<sub>2</sub>, SO<sub>3</sub>-alkyl-(C<sub>1</sub>-C<sub>4</sub>), SO<sub>2</sub>-alkyl-(C<sub>1</sub>-C<sub>6</sub>), SO-alkyl-(C<sub>1</sub>-C<sub>6</sub>) and Si(alkyl)<sub>3</sub>-(C<sub>1</sub>-C<sub>8</sub>), and/or R<sup>3</sup> and R<sup>4</sup> are selected independently from the group consisting of O-alkyl-(C<sub>1</sub>-C<sub>8</sub>), OCO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), O-aryl, fluorine, OH, NH<sub>2</sub>, NH-alkyl-(C<sub>1</sub>-C<sub>8</sub>), N-alkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub>), NHCO-alkyl-(C<sub>1</sub>-C<sub>4</sub>), NHCOO-alkyl-(C<sub>1</sub>-C<sub>4</sub>), and NHaryl-(C<sub>6</sub>-C<sub>10</sub>),

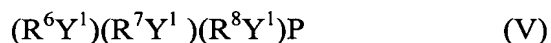
where alkyl is, for the purposes of the present invention, an unbranched or branched aliphatic or cyclic radical, alkenyl is an olefinic hydrocarbon, alkynyl is an acetylenic hydrocarbon and aryl is an aromatic radical,

alkyl, alkenyl, alkynyl and also aryl may bear substituents selected independently from among hydrogen, O-alkyl-(C<sub>1</sub>-C<sub>8</sub>), OCO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), O-phenyl, phenyl, aryl(C<sub>6</sub>-C<sub>10</sub>), fluorine, chlorine, bromine, iodine, OH, NO<sub>2</sub>, CF<sub>3</sub>, CN, COOH, COOM where M is a cation selected from the group consisting of Li<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, Mg<sup>2+</sup>, Ca<sup>2+</sup>, NH<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl)<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl/C<sub>6</sub>-C<sub>10</sub>-aryl)<sub>4</sub><sup>+</sup>, CHO, SO<sub>3</sub>H, NH<sub>2</sub>, NH-alkyl-(C<sub>1</sub>-C<sub>8</sub>), N-alkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub>), NHCO-alkyl-(C<sub>1</sub>-C<sub>4</sub>), COO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CONH<sub>2</sub>, CO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), NHCOH, NHCOO-alkyl-(C<sub>1</sub>-C<sub>4</sub>), CO-phenyl, COO-phenyl, COO-aryl-(C<sub>6</sub>-C<sub>10</sub>), CO-aryl-(C<sub>6</sub>-C<sub>10</sub>), CHCH-CO<sub>2</sub>-alkyl-(C<sub>1</sub>-C<sub>8</sub>), P(aryl)<sub>2</sub>, CHCHCO<sub>2</sub>H, P-alkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub>), PO-aryl<sub>2</sub>, POalkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub>), PO<sub>3</sub>H<sub>2</sub>, POalkyl-(C<sub>1</sub>-C<sub>4</sub>)(O-alkyl-(C<sub>1</sub>-C<sub>6</sub>)), PO(O-alkyl-(C<sub>1</sub>-C<sub>6</sub>))<sub>2</sub>, SO<sub>3</sub>-alkyl-(C<sub>1</sub>-C<sub>4</sub>), SO<sub>2</sub>-alkyl-(C<sub>1</sub>-C<sub>6</sub>), SO-alkyl-(C<sub>1</sub>-C<sub>6</sub>) and Si(alkyl)<sub>3</sub>-(C<sub>1</sub>-C<sub>8</sub>),

both R<sup>1</sup> and R<sup>2</sup> and also R<sup>3</sup> and R<sup>4</sup> can be linked by covalent bonds so that R<sup>1</sup> and R<sup>2</sup> and/or R<sup>3</sup> and R<sup>4</sup> in each case form a four- to eight-membered ring, where R<sup>1</sup> or R<sup>2</sup> may also be part of an organometallic compound,

in the presence of hydrogen and a homogeneous catalyst system comprising at least one metal atom selected from the group consisting of Rh, Ru, Ir, Pd, Pt, Co and Ni and one or more monodentate or bidentate achiral or chiral ligands of the formula (IV) or (V)





where

$R^6$  to  $R^9$  are identical or different and are each a hydrogen atom,  $C_1$ - $C_{24}$ -alkyl,  $C_2$ - $C_{20}$ -alkenyl,  $C_3$ - $C_8$ -cycloalkyl,  $C_5$ - $C_8$ -cycloalkenyl,  $C_6$ - $C_{14}$ -aryl, phenyl, naphthyl, fluorenyl,  $C_2$ - $C_{13}$ -heteroaryl, where the number of heteroatoms from the group consisting of N, O, S can be 1-4,

and in which all the abovementioned substituents may each be substituted by one or more substituents selected independently from among hydrogen,  $C_1$ - $C_{20}$ -alkyl,  $C_2$ - $C_{20}$ -alkenyl,  $C_1$ - $C_{10}$ -haloalkyl,  $C_3$ - $C_8$ -cycloalkyl,  $C_5$ - $C_8$ -cycloalkenyl,  $C_2$ - $C_9$ -heterocycloalkyl,  $C_1$ - $C_9$ -heterocyclo-alkenyl,  $C_6$ - $C_{14}$ -aryl, phenyl,  ~~$C_2$ - $C_{13}$ -heteroaryl, where the number of heteroatoms from the group consisting of N, O, S can be 1-4,~~  $C_1$ - $C_{10}$ -alkoxy, OCO-alkyl- $(C_1$ - $C_8)$ , O-aryl- $(C_5$ - $C_{10})$ , O-phenyl,  $C_1$ - $C_9$ -trihalomethylalkyl, fluoro, chloro, bromo, iodo, nitro, hydroxy, trifluoromethylsulfonato, oxo, thio, thiolato, amino,  $C_1$ - $C_8$ -substituted amino of the types mono- and di- $C_1$ - $C_8$ -alkylamino or  $C_2$ - $C_8$ -alkenylamino or mono-, di-, tri- $C_6$ - $C_8$ -arylamino or  $C_1$ - $C_8$ -alkyl- $C_6$ - $C_8$ -arylamino, NH-CO-alkyl- $C_1$ - $C_8$ , NH-CO-aryl- $C_6$ - $C_8$ , cyano,  $C_1$ - $C_8$ -acyloxy, carboxyl, carboxylato of the formula  $COOR^{12}$ , sulfinato, sulfonato of the formula  $SO_3R^{12}$ , phosphonato of the formula  $PO_3H_2$ ,  $PO_3HR^{12}$ ,  $PO_3R^{12}_2$ , where  $R^{12}$  is either a monovalent cation,  $NH^{4+}$ ,  $N(C_1-C_{10}\text{-alkyl})_4^+$ ,  $N(C_1-C_{10}\text{-alkyl}/C_6-C_{10}\text{-aryl})_4^+$ ,  $C_1$ - $C_{18}$ -alkyl or  $C_6$ -aryl, tri- $C_1$ - $C_6$ -alkylsilyl,

and where two of these substituents may also be bridged,

$X^1$  and  $X^2$  are each, independently of one another, a direct phosphorus-carbon bond, O, S or  $NR^{10}$ , where

$R^{10}$  corresponds to one of the radicals defined for  $R^6$ - $R^9$ ,

$Y^1$  and  $Y^2$  is a direct phosphorus-carbon bond, -O- or  $-NR^{11}$ -, where

$R^{11}$  corresponds to one of the radicals defined for  $R^6$ - $R^9$ ,

Z corresponds to 1-6 carbon atoms which are bound to one another by single or multiple bonds and connect the unit

$(R^6Y^1)(R^7Y^1)PX^1$  to the unit  $X^2P(Y^2R^8)(Y^2R^9)$ , where Z may be part of an aliphatic, cycloaliphatic, olefinic, cycloolefinic system which may contain from one to four heteroatoms from the group consisting of N, O, S, a metallocene, in particular a ferrocene, a 1,1'-disubstituted ferrocene, 1-(1-ethylenyl)-2-ferrocenyl or a 1,2-disubstituted ferrocene, or one or more aromatic or heteroaromatic ring systems, where the ring system comprises a total of from 2 to 14 carbon atoms which may be monosubstituted or polysubstituted by substituents as specified for  $R^6$ - $R^9$  or directly by C<sub>1</sub>-C<sub>10</sub>-alkoxy, OCO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), O-aryl-(C<sub>5</sub>-C<sub>10</sub>), O-phenyl, C<sub>1</sub>-C<sub>9</sub>-trihalomethylalkyl, trifluoromethyl, trichloromethyl, fluoro, chloro, bromo, iodo, nitro, hydroxy, trifluoromethylsulfonato, oxo, thio, thiolato, amino, C<sub>1</sub>-C<sub>8</sub>-substituted amino of the formulae NH<sub>2</sub>, NH-alkyl-C<sub>1</sub>-C<sub>8</sub>, NH-aryl-C<sub>5</sub>-C<sub>6</sub>, N-alkyl<sub>2</sub>-C<sub>1</sub>-C<sub>8</sub>, N-aryl<sub>2</sub>-C<sub>5</sub>-C<sub>6</sub>, N-alkyl<sub>3</sub>-C<sub>1</sub>-C<sub>8</sub><sup>+</sup>, N-aryl<sub>2</sub>-C<sub>5</sub>-C<sub>6</sub>-aryl-C<sub>5</sub>-C<sub>6</sub><sup>+</sup>, C<sub>1</sub>-C<sub>6</sub>-acyloxy, carboxylato of the formulae COOH and COOR<sup>12</sup>, sulfinato, sulfonato of the formulae SO<sub>3</sub>H and SO<sub>3</sub>R<sup>12</sup>, phosphonato of the formulae PO<sub>3</sub>H<sub>2</sub>, PO<sub>3</sub>HR<sup>12</sup> and PO<sub>3</sub>R<sup>12</sup><sub>2</sub>, where R<sup>12</sup> is either a monovalent cation, NH<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl)<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl/C<sub>6</sub>-C<sub>10</sub>-aryl)<sub>4</sub><sup>+</sup>, C<sub>1</sub>-C<sub>8</sub>-alkyl or C<sub>6</sub>-aryl, C<sub>1</sub>-C<sub>6</sub>-trialkylsilyl, NHCO-alkyl-(C<sub>1</sub>-C<sub>4</sub>), COO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CONH<sub>2</sub>, CON(alkyl-(C<sub>1</sub>-C<sub>8</sub>))<sub>2</sub>, CO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CO-alkenyl-(C<sub>1</sub>-C<sub>8</sub>), NHCOO-alkyl-(C<sub>1</sub>-C<sub>4</sub>), CO-aryl-(C<sub>6</sub>-C<sub>10</sub>), CO-phenyl, COO-aryl-(C<sub>6</sub>-C<sub>10</sub>), COO-phenyl, CHCH-CO<sub>2</sub>-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CHCHCO<sub>2</sub>H, and

P is a trivalent phosphorus atom.

Claim 2 (Currently Amended): The process as claimed in claim 1, wherein bidentate ligands of the formula (IV) in which R<sup>6</sup> to R<sup>9</sup> are, independently of one another, C<sub>1</sub>-C<sub>8</sub>-alkyl, C<sub>5</sub>-C<sub>6</sub>-cycloalkyl, C<sub>6</sub>-aryl, ~~C<sub>4</sub>-C<sub>5</sub>-heteroaryl, where the number of heteroatoms is 1-2, selected from the group consisting of N, O, S, and the ring size is 5-6,~~ or are naphthyl, with these

groups being able to bear one or more substituents, preferably substituents selected independently from among hydrogen, C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>5</sub>-C<sub>6</sub>-cycloalkyl, C<sub>2</sub>-C<sub>9</sub>-heterocycloalkyl, C<sub>6</sub>-aryl, phenyl, C<sub>4</sub>-C<sub>5</sub>-heteroaryl, where the number of heteroatoms from the group consisting of N, O, S, can be 1-2, C<sub>1</sub>-C<sub>6</sub>-alkoxy, OCO-alkyl-(C<sub>1</sub>-C<sub>6</sub>), O-aryl-C<sub>6</sub>, C<sub>1</sub>-C<sub>6</sub>-trihalomethylalkyl, fluoro, chloro, bromo, iodo, nitro, hydroxy, oxo, thio, thiolato, amino, C<sub>1</sub>-C<sub>8</sub>-substituted amino of the types mono-, di-, tri-C<sub>1</sub>-C<sub>8</sub>-alkylamino or C<sub>2</sub>-C<sub>8</sub>-alkenylamino or mono- and di-C<sub>6</sub>-C<sub>8</sub>-arylamino or C<sub>1</sub>-C<sub>8</sub>-alkyl-C<sub>6</sub>-C<sub>8</sub>-arylamino, NH-CO-alkyl-C<sub>1</sub>-C<sub>8</sub>, NH-CO-aryl-C<sub>6</sub>-C<sub>8</sub>, C<sub>1</sub>-C<sub>8</sub>-acyloxy, carboxyl, carboxylato of the formula COOR<sup>12</sup>, sulfinato, sulfonato of the formula SO<sub>3</sub>R<sup>12</sup>, phosphonato of the formula PO<sub>3</sub>H<sub>2</sub>, PO<sub>3</sub>HR<sup>12</sup>, PO<sub>3</sub>R<sup>12</sup><sub>2</sub>, where R<sup>12</sup> is either a monovalent or divalent cation (Li<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, Mg<sup>2+</sup>, Ca<sup>2+</sup>), NH<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl)<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl/C<sub>6</sub>-C<sub>10</sub>-aryl)<sub>4</sub><sup>+</sup>, C<sub>1</sub>-C<sub>6</sub>-alkyl or C<sub>6</sub>-aryl, and tri-C<sub>1</sub>-C<sub>6</sub>-alkylsilyl, are used.

Claim 3 (Currently Amended): The process as claimed in claim 1, wherein R<sup>6</sup> to R<sup>9</sup> are selected independently from the group consisting of (C<sub>3</sub>-C<sub>8</sub>)-alkyl, (C<sub>6</sub>-C<sub>10</sub>)-aryl, O-(C<sub>5</sub>-C<sub>8</sub>)-alkyl, O-(C<sub>6</sub>-C<sub>10</sub>)-aryl or an aliphatic or aromatic (C<sub>3</sub>-C<sub>9</sub>) heterocycle containing from 1 to 4 nitrogen atoms.

Claim 4 (Original): The process as claimed in claim 1, wherein R<sup>6</sup> and R<sup>7</sup> and/or R<sup>8</sup> and R<sup>9</sup> may be linked by a covalent bond so as to form a cyclic compound having from four to eight atoms.

Claim 5 (Previously Presented): The process as claimed in claim 1, wherein ligands in which Y<sup>1</sup> and Y<sup>2</sup> are each a direct phosphorus-carbon bond.

Claim 6 (Original): The process as claimed in claim 1, wherein Z comprises from one to four carbon atoms, in particular two carbon atoms.

Claim 7 (Previously Presented): The process as claimed in claim 1, wherein Z is a C<sub>1</sub>-C<sub>6</sub>-alkyl or C<sub>2</sub>-C<sub>6</sub>-alkenyl group or is part of a C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, C<sub>5</sub>-C<sub>8</sub>-cycloalkenyl, C<sub>2</sub>-C<sub>9</sub>-heterocycloalkyl, C<sub>1</sub>-C<sub>9</sub>-heterocycloalkenyl, C<sub>6</sub>-C<sub>14</sub>-aryl, phenyl, naphthyl, fluorenyl or C<sub>2</sub>-C<sub>13</sub>-heteroaryl group, where the number of heteroatoms from the group consisting of can be 1-4 and all these groups may be monosubstituted or polysubstituted.

Claim 8 (Original): The process as claimed in claim 1, wherein ligands in which a three- to nine-membered ring system can be formed by Z, X<sup>1</sup>, X<sup>2</sup>, P<sup>1</sup> and P<sup>2</sup> together with a coordinated metal are used.

Claim 9 (Original): The process as claimed in claim 1, wherein 1,4-bis(diphenylphosphino)butane, 1,4-bis(dicyclohexylphosphino)-butane, 2-diphenylphosphinomethyl-4-diphenylphosphino-1-tert-butoxycarbonylpyrrolidine, 2,3-O-isopropylidene-2,3-dihydroxy-1,4-bis(diphenylphosphino)butane, (2*R*,3*R*,5*R*,6*R*)-2,3-dimethoxy-2,3-dimethyl-5,6-bis(diphenylphosphinomethyl)-1,4-dioxane, tris-(3-sulfophenyl)phosphine trisodium salt, 2,2'-bis[[bis(3-sulfophenyl)phosphino]methyl]-4,4',7,7'-tetrasulfo-1,1'-binaphthyl octasodium salt, diphosphinite ligands based on carbohydrates, 1,2-bis(diphenylphosphinoxy)ethane, (1*R*,2*R*)-(trans)-1,2-bis-(diphenylphosphinoxy)cyclohexane, (2*R*)-1-[[bis(diphenylphosphino)(cyclo-pentyl)amino]methyl]-2-diphenylphosphinoxy-3-(1-naphthalenyl-oxy)propane and/or (4*S*)-2-(2-(diphenylphosphino)phenyl)-4-isopropyl-1,3-oxazoline are used as ligands.

Claim 10 (Currently Amended): The process as claimed in claim 1, wherein the starting materials of the formulae (I) and/or (II) used are ones whose substituents R<sup>1</sup> to R<sup>4</sup> are each, independently of one another, hydrogen, (C<sub>1</sub>-C<sub>12</sub>)-alkyl, (C<sub>2</sub>-C<sub>12</sub>)-alkenyl, (C<sub>2</sub>-C<sub>12</sub>)-alkynyl, (C<sub>6</sub>-C<sub>10</sub>)-aryl, CF<sub>3</sub>, ~~CN, COOH, COOM, where M is a cation selected from the group consisting of Li<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, Mg<sup>2+</sup>, Ca<sup>2+</sup>, NH<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl)<sub>4</sub><sup>+</sup>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl/C<sub>6</sub>-C<sub>10</sub>-aryl)<sub>4</sub><sup>+</sup>, COO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CONH<sub>2</sub>, CONHalkyl-(C<sub>1</sub>-C<sub>8</sub>), CONalkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub>), CO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CO-phenyl, COO-phenyl, COO-aryl-(C<sub>6</sub>-C<sub>10</sub>), CO-aryl-(C<sub>6</sub>-C<sub>10</sub>), PO(aryl-C<sub>6</sub>-C<sub>10</sub>)<sub>2</sub>, POalkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub>), PO<sub>3</sub>H<sub>2</sub>, PO(alkyl-(C<sub>1</sub>-C<sub>4</sub>))(Oalkyl-(C<sub>1</sub>-C<sub>4</sub>)), PO(O-alkyl-(C<sub>1</sub>-C<sub>6</sub>))<sub>2</sub> and Si(alkyl)<sub>3</sub>-(C<sub>1</sub>-C<sub>8</sub>)~~ and/or R<sup>3</sup> and R<sup>4</sup> are selected independently from the group consisting of ~~O-alkyl-(C<sub>1</sub>-C<sub>8</sub>), OCO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), O-aryl-(C<sub>6</sub>-C<sub>10</sub>), OH, NH<sub>2</sub>, NH-alkyl-(C<sub>1</sub>-C<sub>8</sub>), N-alkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub>), NHCO-alkyl-(C<sub>1</sub>-C<sub>4</sub>), NHCOO-alkyl-(C<sub>1</sub>-C<sub>4</sub>), and NHaryl-(C<sub>6</sub>-C<sub>10</sub>)~~, where alkyl is an unbranched or branched aliphatic or cyclic radical alkenyl is an olefinic hydrocarbon, alkynyl is an acetylenic hydrocarbon and aryl is an aromatic radical,

and alkyl, alkenyl and alkynyl and also aryl may bear substituents selected independently from among hydrogen, O-alkyl-(C<sub>1</sub>-C<sub>8</sub>), OCO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), O-phenyl, phenyl, aryl-C<sub>6</sub>-C<sub>10</sub>, fluorine, chlorine, bromine, iodine, OH, NO<sub>2</sub>, Si-alkyl<sub>3</sub>-(C<sub>1</sub>-C<sub>8</sub>), CF<sub>3</sub>, ~~CN, COOH, COOM where M is a monovalent cation selected from the group consisting of Na, K, Rb, Cs, NH<sub>4</sub>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl)<sub>4</sub>, N(C<sub>1</sub>-C<sub>10</sub>-alkyl/C<sub>6</sub>-C<sub>10</sub>-aryl)<sub>4</sub>, and SO<sub>3</sub>H~~, N-alkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>8</sub>), SO<sub>2</sub>-alkyl-(C<sub>1</sub>-C<sub>6</sub>), SO-alkyl-(C<sub>1</sub>-C<sub>6</sub>), NHCO-alkyl-(C<sub>1</sub>-C<sub>4</sub>), COO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CONH<sub>2</sub>, CO-alkyl-(C<sub>1</sub>-C<sub>8</sub>), CO-phenyl, COO-phenyl, COO-aryl-(C<sub>6</sub>-C<sub>10</sub>), CO-aryl-(C<sub>6</sub>-C<sub>10</sub>), PO-phenyl<sub>2</sub>, POalkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub>), PO<sub>3</sub>H<sub>2</sub>, POalkyl-(C<sub>1</sub>-C<sub>4</sub>)(O-alkyl-(C<sub>1</sub>-C<sub>6</sub>)), PO(O-alkyl-(C<sub>1</sub>-C<sub>6</sub>))<sub>2</sub>, and Si(alkyl)<sub>3</sub>(C<sub>1</sub>-C<sub>8</sub>), where alkyl and aryl are as defined above.

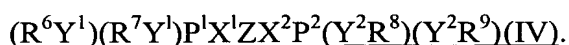
Claim 11 (Original): The process as claimed in claim 1, wherein the starting materials of the formulae (I) and/or (II) used are ones in which  $R^1$  and  $R^2$  and/or  $R^3$  and  $R^4$  are linked by covalent bonds so as to form a three- to nine-membered ring.

Claim 12 (Original): The process as claimed in claim 1, wherein metal complexes having central atoms selected from the group consisting of Rh, Ru, Ir, Pd, Pt, Ni, in particular ones containing rhodium as central atom, are used as homogeneous metal atom-ligand complex.

Claim 13 (Original): The process as claimed in claim 1, wherein alkyl is an unbranched or branched aliphatic or cyclic hydrocarbon and aryl is an aromatic radical.

Claim 14 (Currently Amended): The process as claimed in claim 13, wherein both alkyl and aryl bear substituents selected independently from among hydrogen, O-alkyl-(C<sub>1</sub>-C<sub>8</sub>), O-phenyl, phenyl, aryl, fluorine, chlorine, OH, NO<sub>2</sub>, Si-alkyl<sub>3</sub>-(C<sub>1</sub>-C<sub>4</sub>), CF<sub>3</sub>, ~~CN~~, SO<sub>3</sub>H, N-alkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub>), CO-phenyl, COO-phenyl, COO-aryl-(C<sub>6</sub>-C<sub>10</sub>), CO-aryl-(C<sub>6</sub>-C<sub>10</sub>), PO-phenyl<sub>2</sub>, POalkyl<sub>2</sub>-(C<sub>1</sub>-C<sub>4</sub>), PO(O-alkyl(C<sub>1</sub>-C<sub>6</sub>))<sub>2</sub>, and Si((alkyl)<sub>3</sub>-(C<sub>1</sub>-C<sub>8</sub>)), where alkyl and aryl are as defined above.

Claim 15 (Currently Amended): The process as claimed in claim 1 ~~which is carried out at a temperature of -40-100°C~~ where the catalyst system comprises one or more achiral or chiral bidentate ligands of the formula (IV)





Claim 16 (Original): The process as claimed in claim 1 in which further additives are used.

Claim 17 (Original): The process as claimed in claim 16 carried out using phosphine-  
- rhodium complexes in the presence of acids.

Claim 18 (Original): The process as claimed in claim 1 carried out using phosphinite-  
rhodium catalysts without the addition of additives.

Claim 19 (Cancelled).

Claim 20 (Original): The process as claimed in claim 1, wherein the initial hydrogen  
pressure is from 0.1 to 300 bar.

Claim 21 (Original): The process as claimed in claim 1, wherein the catalyst system is  
used in an amount of from 0.001 to 5 mol%, based on the carbonyl component of the formula  
(I).

Claim 22 (New): The process as claimed in claim 1, wherein solvents used are selected  
from the group consisting of alcohol, water, halogenated hydrocarbons, ethers, aromatic  
hydrocarbons, and mixtures thereof.